

▼ BEST ▼  
TRACKLAYER  
TRACTOR



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CALBEST  
GAS TRACTION CO.  
San Leandro California





CL. BEST  
GAS FRACTION CO.  
SANTA MONICA, CALIFORNIA



# BEST TRACKLAYER SIXTY TRACTOR

**T**HE PURCHASE PRICE OF A TRACTOR IS INSIGNIFICANT WHEN COMPARED WITH MAINTENANCE AND OPERATING EXPENSES. THE LARGEST USERS OF TRACTORS CONSIDER IT FAR CHEAPER TO INVEST MORE MONEY IN "BEST TRACKLAYER" TRACTORS AND ENJOY UNFAILING SERVICE AND LOW EXPENSE OVER A LONG PERIOD OF YEARS THAN TO BUY THE ORDINARY TRACTOR, PAY HIGHER BILLS FOR LESS DEPENDABLE SERVICE, AND STAND MORE RAPID DEPRECIATION ON THE INVESTMENT

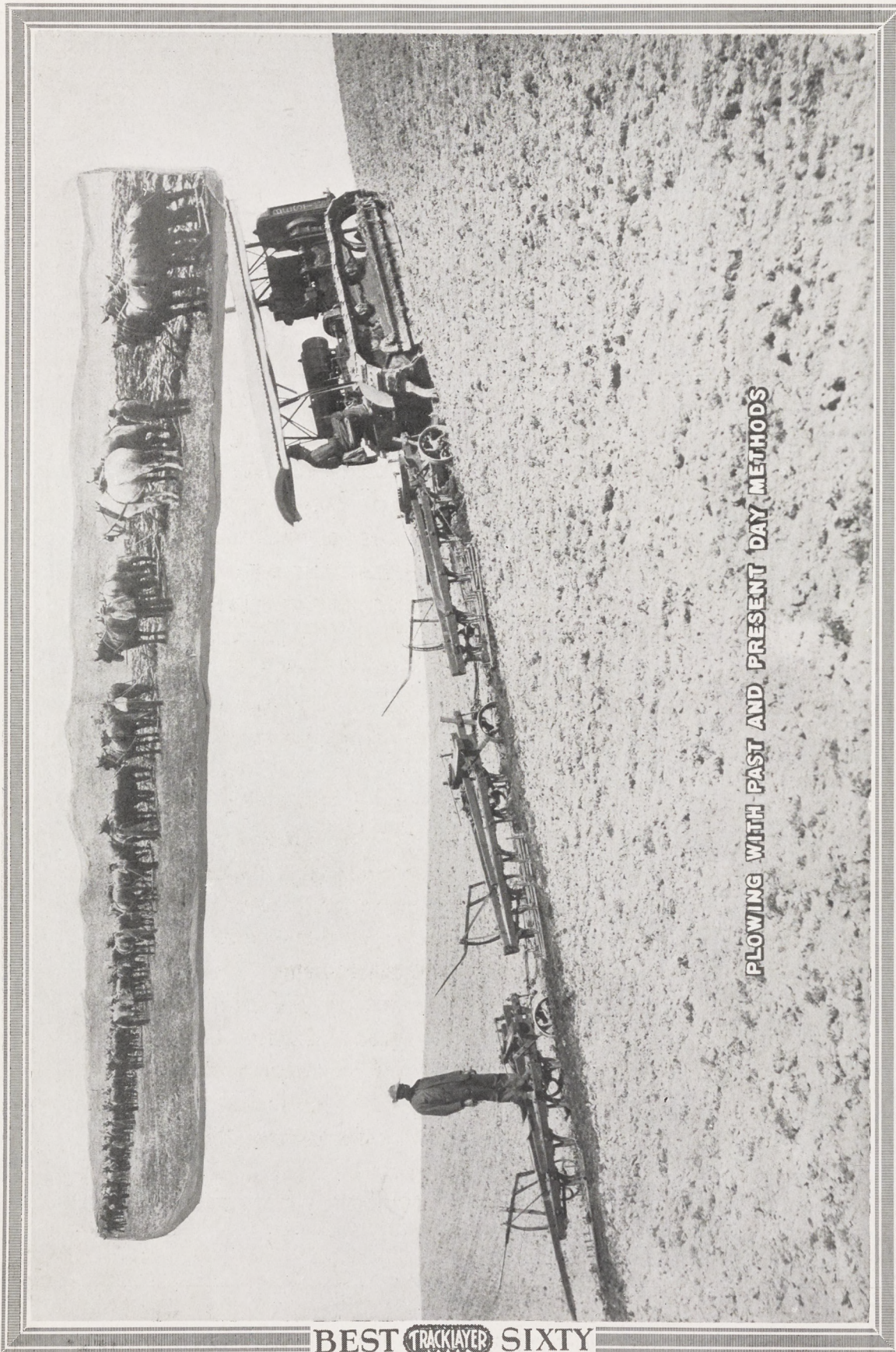


C. L. BEST GAS TRACTION COMPANY

SAN LEANDRO, CALIFORNIA, U. S. A.

BEST **TRACKLAYER** SIXTY





FLOWING WITH PAST AND PRESENT DAY METHODS

BEST TRACKIAYER SIXTY



## A Generation of Tractor Development

THE first BEST Tractor was manufactured nearly thirty years ago, and was a round-wheel steam tractor.

Many of these same BEST steam tractors are in actual operation today.

BEST Steam Tractors, built before the advent of the automobile, were considered highly efficient at that time. The BEST organization, always abreast of the times and thoroughly imbued with the spirit of progress, was among the first to substitute gasoline motors for steam engines on tractors. For a number of years gas round-wheel tractors were manufactured, but, because of the inability of these "round-wheelers" to work in all soil conditions, having entirely failed in soft land and hilly districts, the need arose for a tractor which could meet all requirements, and the need was met by substituting the tracklayer tractor for the round-wheeler.

A great many years have elapsed since the first tracklayer went into the field, and since that time innumerable improvements have been made in succeeding models. The BEST Tracklayer is the result of slow, progressive evolution of experiments, changes and improvements, covering a long period of time. BEST Tractors are thoroughly "time-tested". The experience of thirty years makes it possible for us to manufacture a tractor of such a high standard as the "Sixty", which is undoubtedly the last word in tractor design and construction. The BEST "Sixty" is years ahead of any other tractor on the market. A model of the "Sixty" was thoroughly tested and tried for nearly two years in the field before the C. L. Best Gas Traction Company began to market its production.

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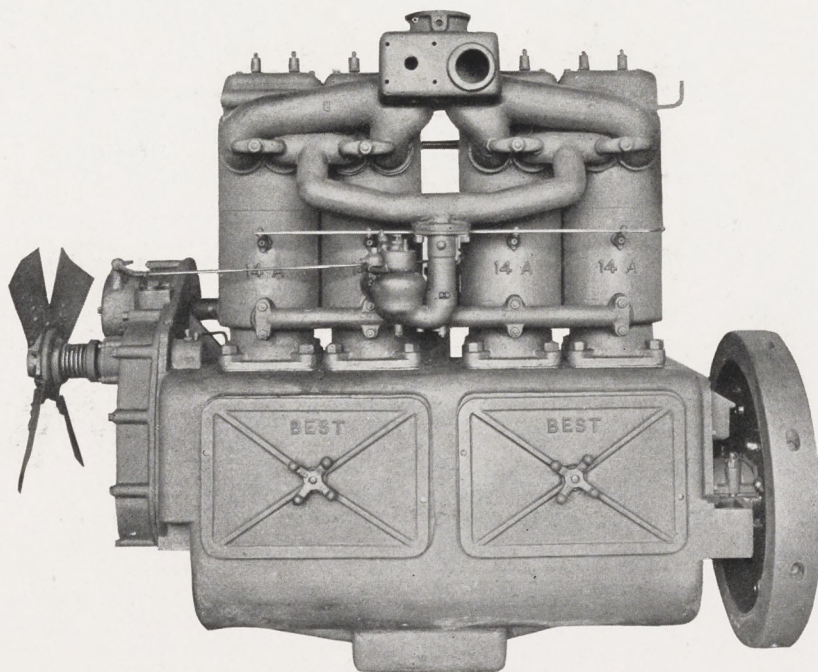
## The Motor

THE BEST Motor is manufactured completely in the BEST plant and receives the same careful, skilled attention that is given the entire tractor. Its mechanical perfection is the result of the superior quality of material and workmanship employed, together with our years of experience in building heavy duty tractor motors—knowing the requirements of a motor built for the heaviest kind of tractor service.

Improvements have been made gradually and thoroughly tested before being placed in service in the marketed product. The new "Sixty" motor shown on this and the opposite page stands today as the best heavy duty tractor motor built. Some of the features follow:

The BEST motor is a valve-in-the-head type with a constant level splash lubricating system, gear driven oil and water pump. Cylinders are cast single with separate removable heads.

The crank case is cast iron with large inspection ports on each side, allowing easy access to working parts. Bearing adjustments are made through these ports; the ports are large enough so that pistons and connecting rods may be removed without stripping down or disturbing the valve mechanism.



BEST TRACKLAYER SIXTY



## The Motor

THE fly wheel is bolted to the flange, which is forged integral with the crank shaft; this overcomes "wobbling." This motor is started with a bar, giving more leverage than the ordinary crank handle and preventing accidents if the motor should backfire.

Drop forged heat-treated crank shaft is  $55\frac{3}{4}$  inches in length and 3 inches in diameter. Crank shaft bearings are  $7\frac{9}{16}$ , 5,  $6\frac{3}{16}$  inches in length; connecting rod bearings are 4 inches in length.

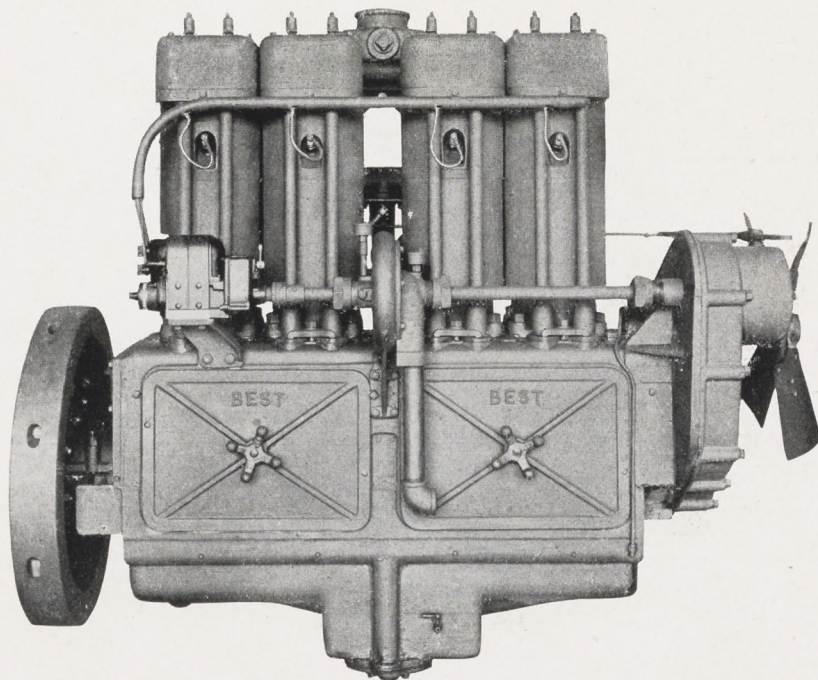
Drop forged connecting rods are used, and the large alloy steel valves, enclosed variable tension governor, enclosed push rods and rocker arms assist in making the "Sixty" motor perfect.

The use of a specially designed intake manifold for heavy fuel and the extra large air cleaner are partly responsible for the perfect carburation in this motor.

The fan is gear driven with interposed spring and friction drive. The elimination of the troublesome fan belt is a marked step in advance.

The magneto, which is equipped with impulse starter, with the pump and governor, are operated on the same shaft.

The standard carburetor furnished burns gasoline or distillate. A kerosene convertor, supplied as an extra, will burn all three fuels.



BEST TRACKLAYER SIXTY



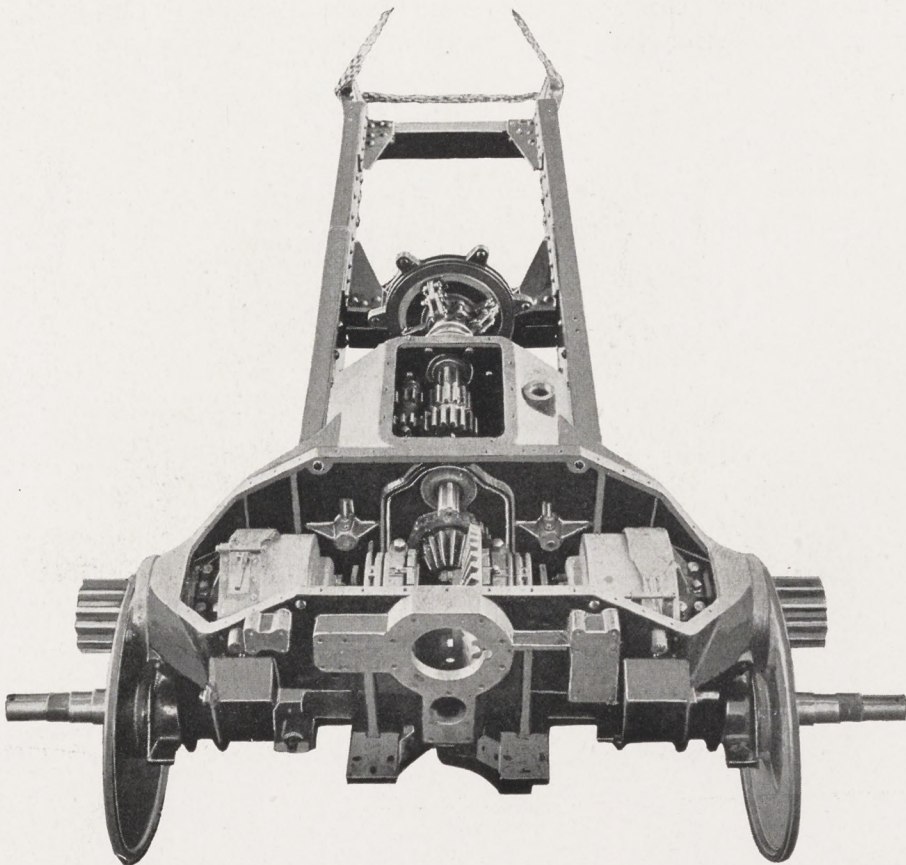
## Rear Housing

**H**OUSED in the one-piece casting shown below are the transmission driving gears and multiple-disc steering clutches. This one-piece casting guarantees absolute alignment. The steel frame shown and one-piece casting form the chassis.

The massive bull pinion gears can be seen protruding through the internal gear dust cover on either side; this covering protects the internal gear.

There is a flexible coupling between the motor and the transmission, which compensates for any misalignment which could occur between the two units.

No babbitt or bushings are used in the transmission. It is accurately machined and bolted with tight fitting bolts to the main frame.



**BEST TRACKLAYER SIXTY**

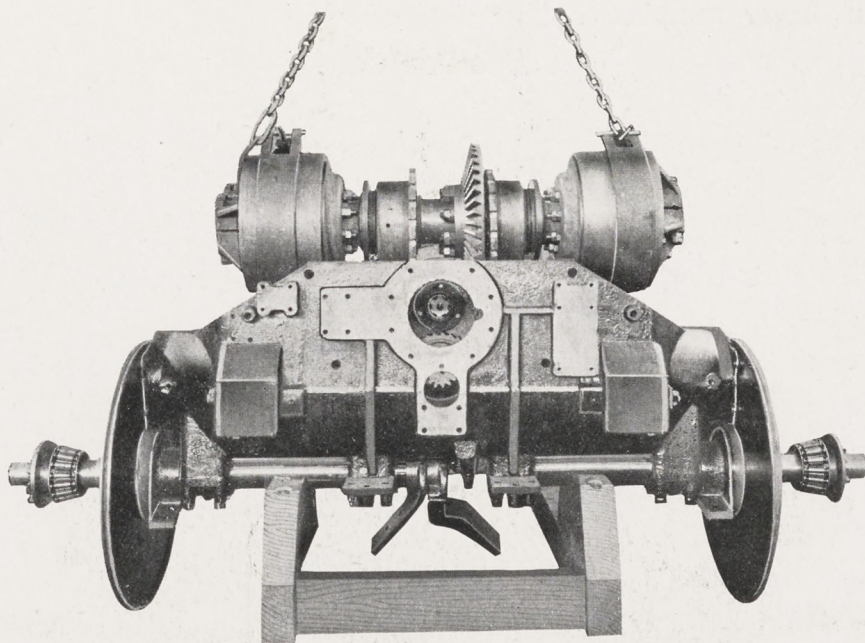


## Rear Construction

THE assembled rear construction shown in illustration below is assembled before placing in the rear housing, and may be removed en bloc with little effort for adjustments or replacements. The main drive, or bull, pinions are easily removed through the ports in the sprocket, corresponding with the full floating axle of the automobile—something previously unheard of in tractor construction.

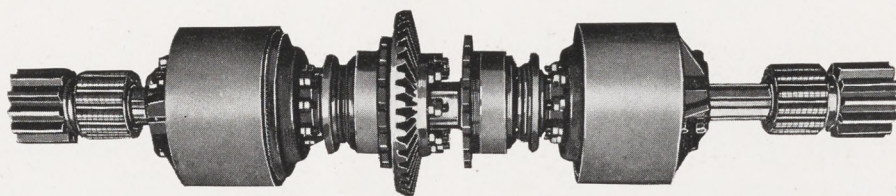
There are eight anti-friction bearings used in this cross shaft assembly.

The rear port shown in the casting is made for the installation of the stationary drive attachment which is driven direct from upper transmission shaft.



BEST TRACKLAYER SIXTY



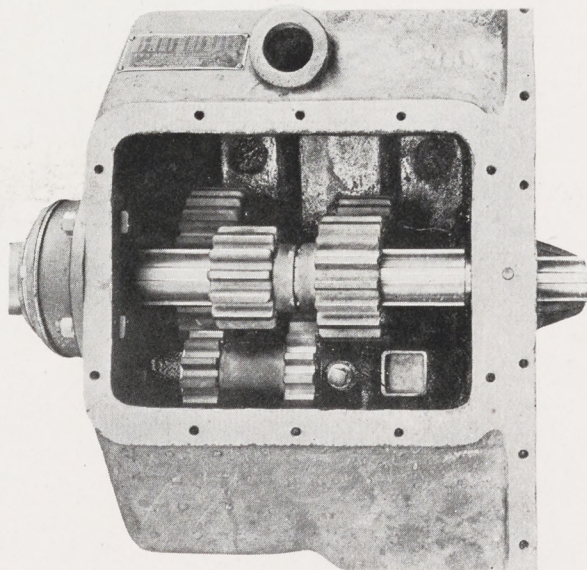


## Cross Shaft Assembly

STEEL cut gears and anti-friction bearings are plainly shown in the above illustration of the cross shaft assembly. Two straight roller, two taper roller and two ball thrust bearings are employed on this shaft. The large drums are the outer drums of the two multiple-disc clutches shown which control the steering. There are sixteen driving and sixteen driven plates lined with clutch lining, housed in each drum and held tightly together by eight sturdy springs; steering is accomplished through the medium of two steering clutch hand levers, which release the steering clutches shown above. The steering clutches control the power transmitted to either track drive sprocket.

## Transmission

THE illustration clearly shows the steel-cut, hardened gears of the transmission. The shafts are mounted on anti-friction bearings. The size of the splines can be easily seen through the upper port, the plate having been removed.



BEST TRACKLAYER SIXTY

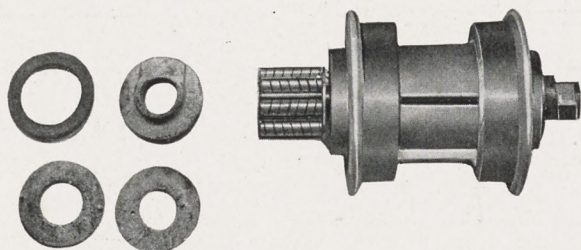


## Track and Trucks

THE "Sixty" is equipped with an all-manganese-steel track with carbon steel cast shoes. The manganese-steel spools and links of the track are cast integral. The life of the track

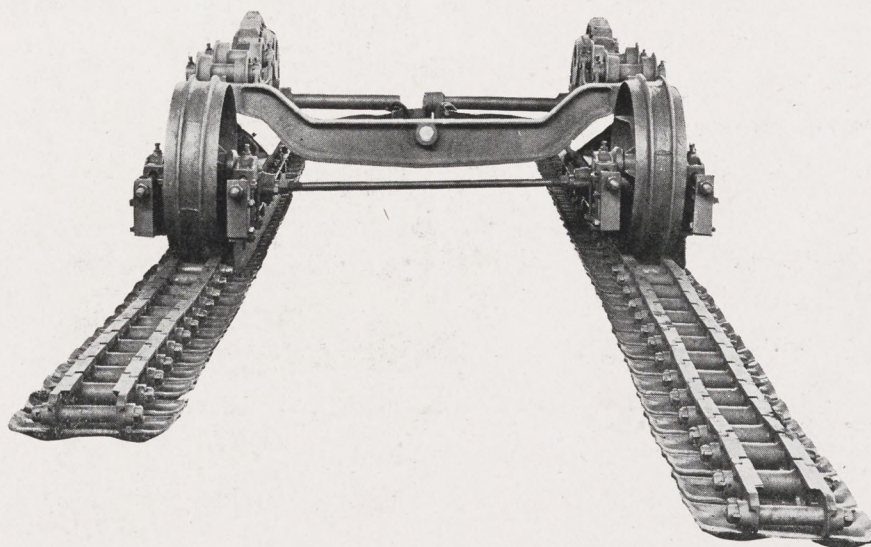
is greatly increased by the use of this new metal.

Tracks are driven by cast-chrome-steel sprockets. The sprockets are internal gear-



driven and mounted on adjustable anti-friction bearings. The truck rollers as shown herewith are mounted on roller bearings with approved dust-protecting felt-washers and housings.

Trucks are of structural steel with three-point suspension in rear and ball-mounted strut or space rod in front, always maintaining track alignment. The tracks measure 72 inches from center to center, thus enabling the "Sixty" to work in row crops, particularly sugar beets. Standard track shoes are 20 inches wide; special track shoes, 10 inches wide, for row crops.



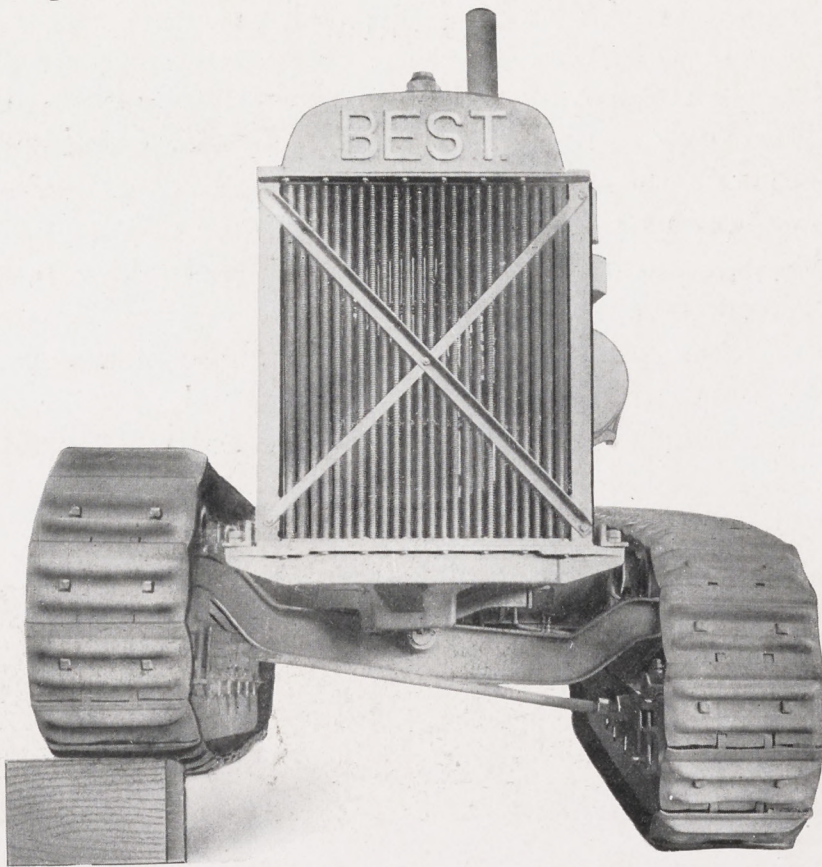
BEST TRACKLAYER SIXTY



## Oscillating Truck

THE forward section of the tractor is carried on a walking beam which rests on springs on each truck. This permits free oscillation of each truck and allows them to follow the contour of the ground. Each truck oscillates from the sprocket axle and each works independently of the other. Although one truck is higher than the other, note that the radiator is parallel to the ground in the illustration below.

It is highly important that a tractor be adaptable for use on soft ground, and that its weight be distributed over such a large area that danger of soil packing and miring be eliminated. The tracklayer will operate under the most unfavorable soil conditions, because it lays its own track and rolls over it; the weight being distributed over such a large area, it cannot pack the soil, nor mire or slip in soft or wet ground.

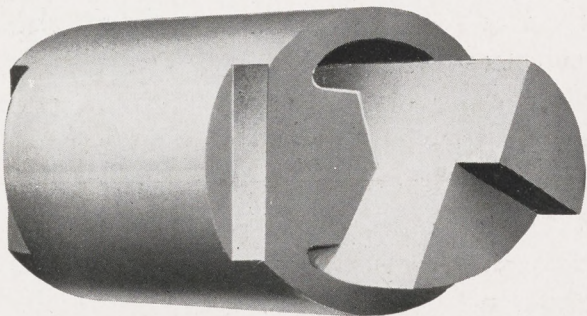


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## Rocker Joint

THE BEST "rocker joint" is the link pin of the track and is made of manganese steel. Inasmuch as it rocks back and



forth on the apex of the spool, friction is minimized and the rocker joint requires no lubricant, thus nothing to hold the "grit" and cut the joint. This "rocker joint," with the man-

ganese links and spools, makes a track that will outlast any other type.

## Radiator

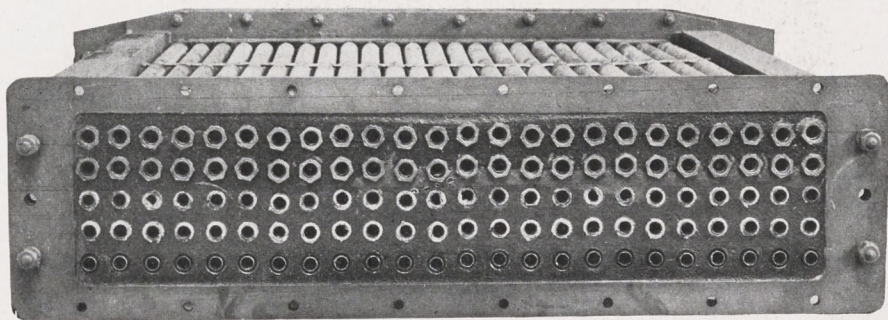
THE illustration of radiator shows the tubes without packing (lower row)—then tubes with packing and without nuts (middle rows)—and also tubes with packing nuts (upper rows). Note cast-iron sides top and bottom.

BEST special tubular construction. Tubes held in position by screwed packing nuts.

Individual tubes can be removed in case of injury.

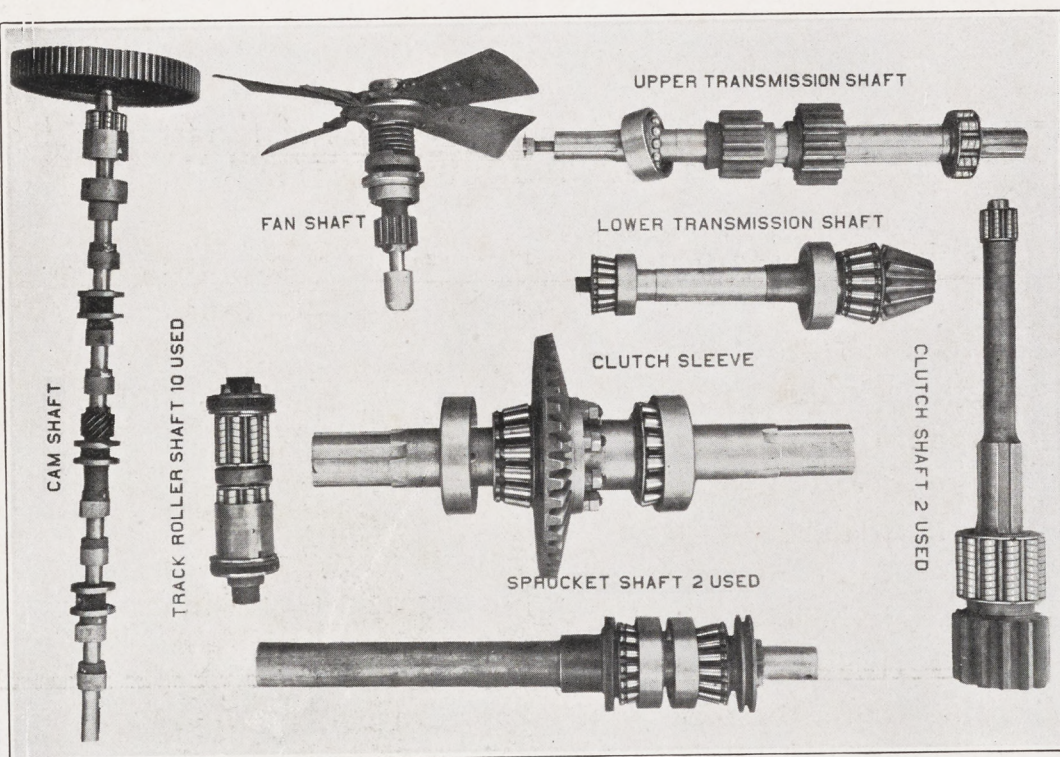
No solder used to hold water.

Large water capacity, eliminating necessity of extra tank.



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## Anti-Friction Bearings

THIRTY-SIX anti-friction bearings are used on the "Sixty" at points where long manufacturing experience indicates. By use of these bearings and by elimination of friction the "Sixty" delivers about sixty-five per cent of its power to the drawbar.

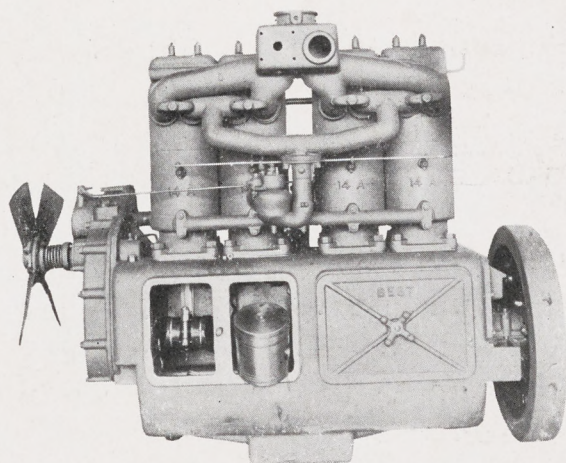
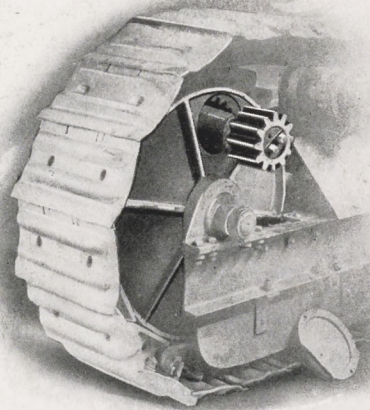
Anti-friction bearings reduce friction and wear to a minimum and assist lubrication; this means longer life, less repairs, and a minimum depreciation on the investment. In the shaft above the location of the various types of bearings used can be plainly seen.

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## Accessibility

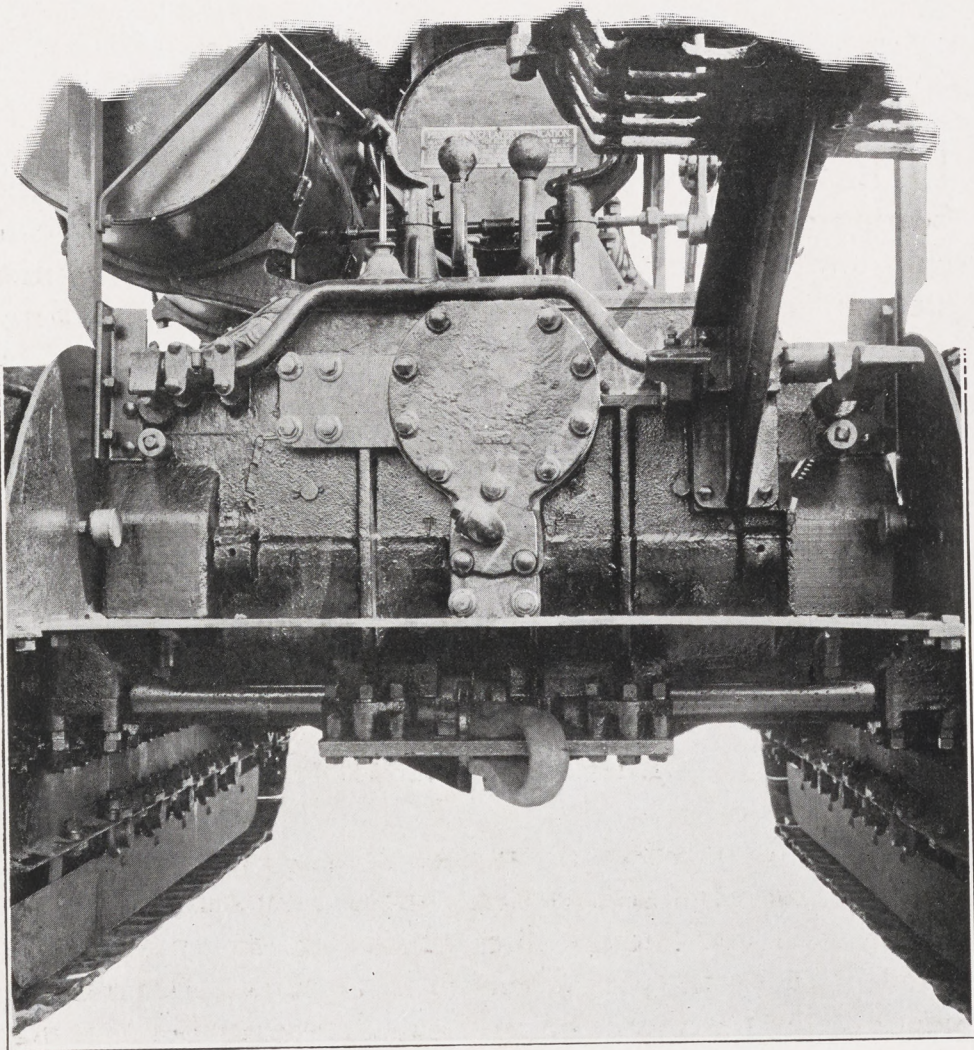
ALL parts are made accessible through the inspection ports on the "Sixty". It is possible in a minute to inspect cylinders, motor bearings, track sprockets, internal gear, main drive pinions, and truck rollers. Main drive pinions may be removed through the inspection port on main drive sprocket, as shown in the illustration on the right. This corresponds to a full-floating rear axle on a truck.



The illustration on the left shows the easy access to all motor parts. All the other working parts of the BEST "Sixty" are as easily accessible as those shown in the two accompanying illustrations.

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### Rear End View

THE above illustration shows the rear construction, seat arrangement, foot brakes, platform, drawbar, etc. The round shaped plate bolted to the rear casting is removed when the stationary drive attachment is placed on the tractor. The husky adjustable drawbar can be seen just under the platform.

BEST **TRACKLAYER** SIXTY



## Lubrication

**L**UBRICATION is simplified by the use of anti-friction bearings and wearing parts running in an oil bath. Grease cups have almost been eliminated, and only a few minutes are now required to "grease up." Where track spools form contact with the teeth of drive sprockets they are oiled by special pipes running direct from the black-oil tank. An application of grease (by means of a grease gun) every few days is the only attention the truck rollers require. Complete instructions on operation and maintenance are contained in our "Sixty" instruction book furnished with every Tracklayer.

## Ease of Operation

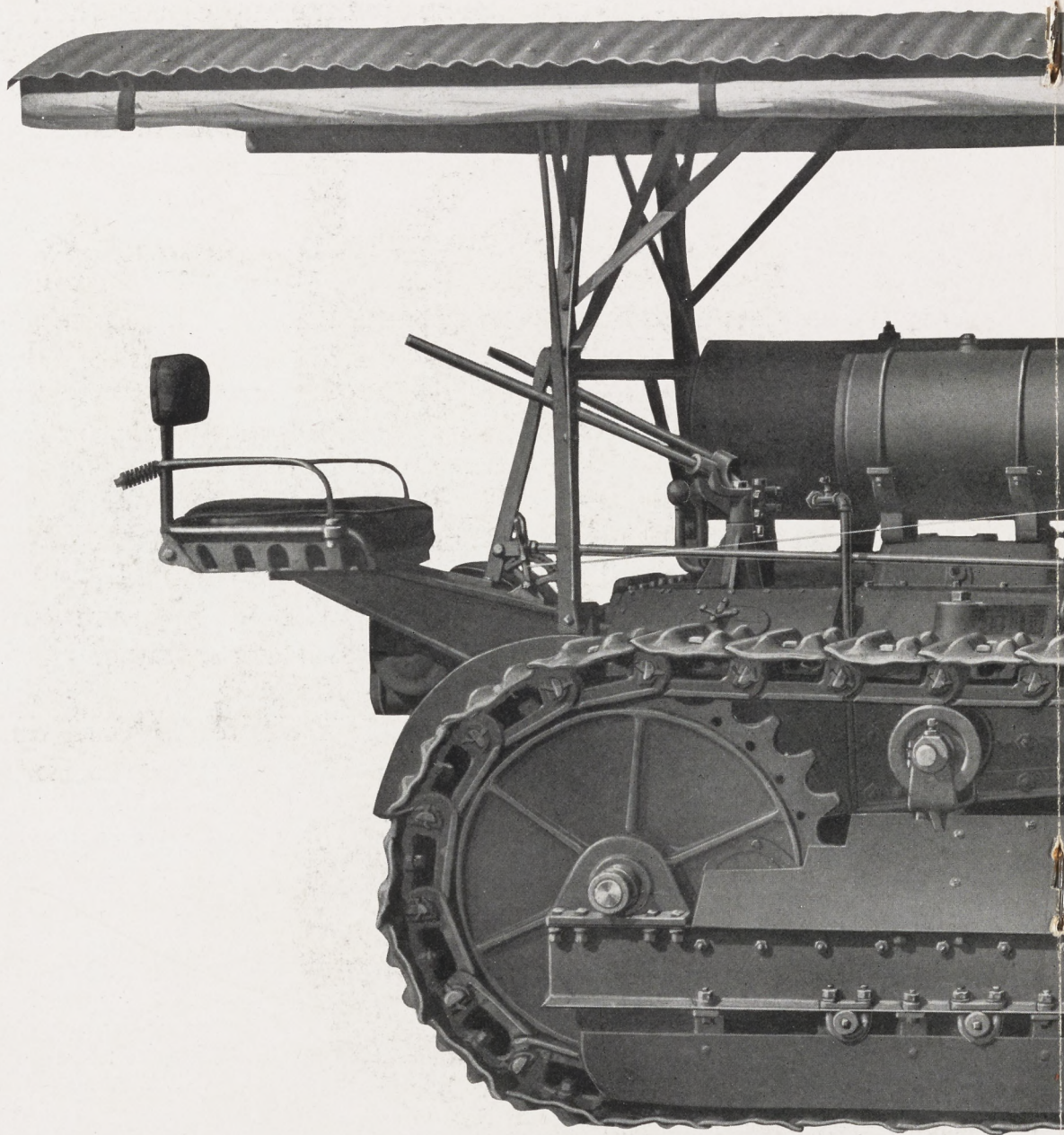
**S**TEERING is effected through roller-bearing mounted, multiple-disc, enclosed friction clutches, consisting of alternating steel and friction discs which run dry in dustproof cases. The entire rear assembly is a connected unit, the steering clutches always being engaged, except when turning.

## Guarantee

**B**ECAUSE the Tracklayer is built in our own factory, under the most painstaking supervision, we are able to make a liberal guarantee of six months against any defective parts or defective workmanship.

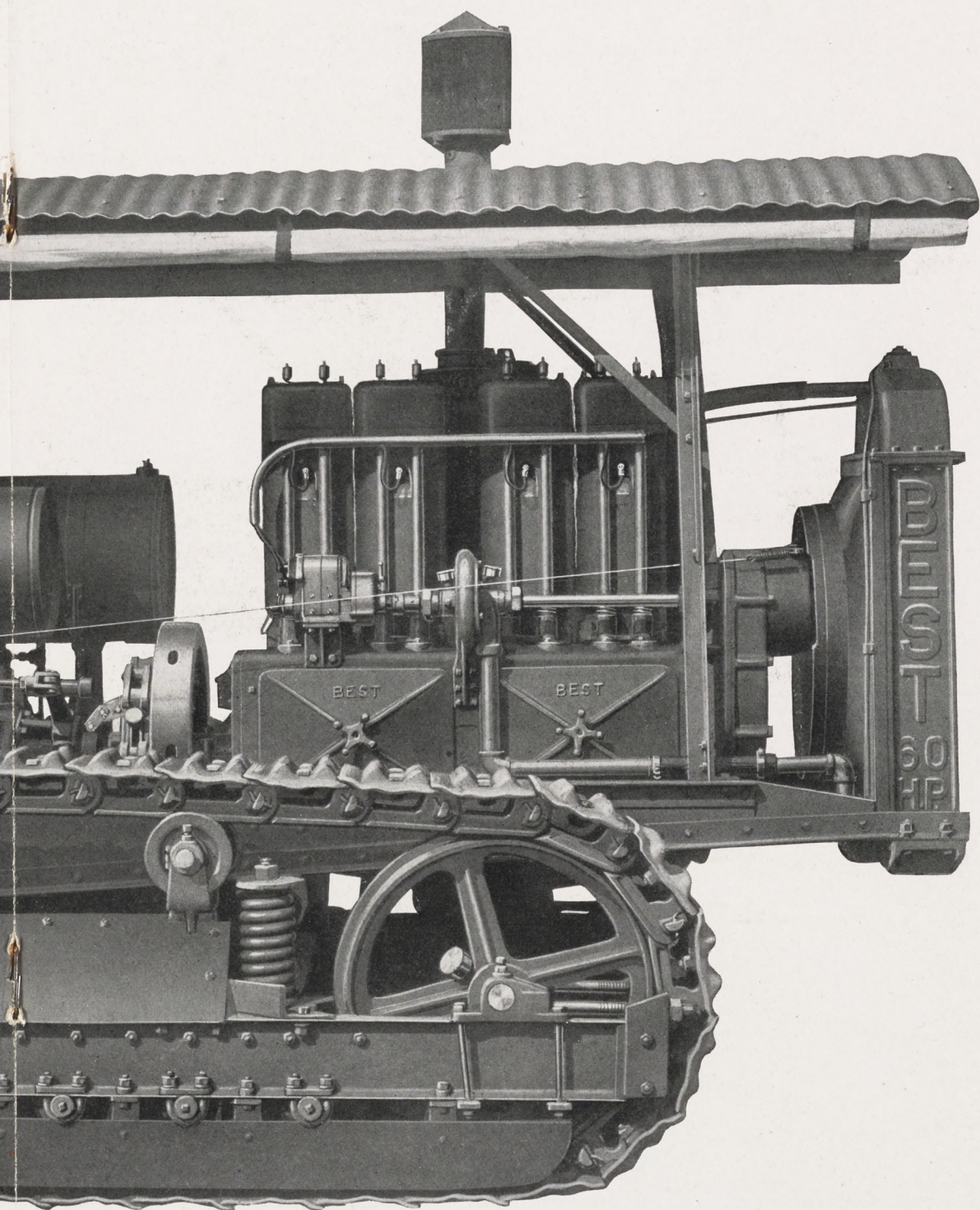
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BEST TRACK





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## Adaptability of the BEST "Sixty"

THE "Sixty" does everything that comes under the heading of plowing, tilling, hauling or belt work. It has ample power to pull a harvester over hills that can be cultivated.



BEST "Sixty" Pulling Twelve 10-inch Bottoms, 7 inches Deep, in Refractory Soil in Kansas

The "Sixty" will displace thirty-five horses, figuring on the ten-hour-day basis. With double shifts twice as many horses are displaced, as well as the men required to drive and care for them.

The "Sixty" at the belt delivers sixty actual horse-power, sufficient to drive any machinery requiring belt power on the farm.

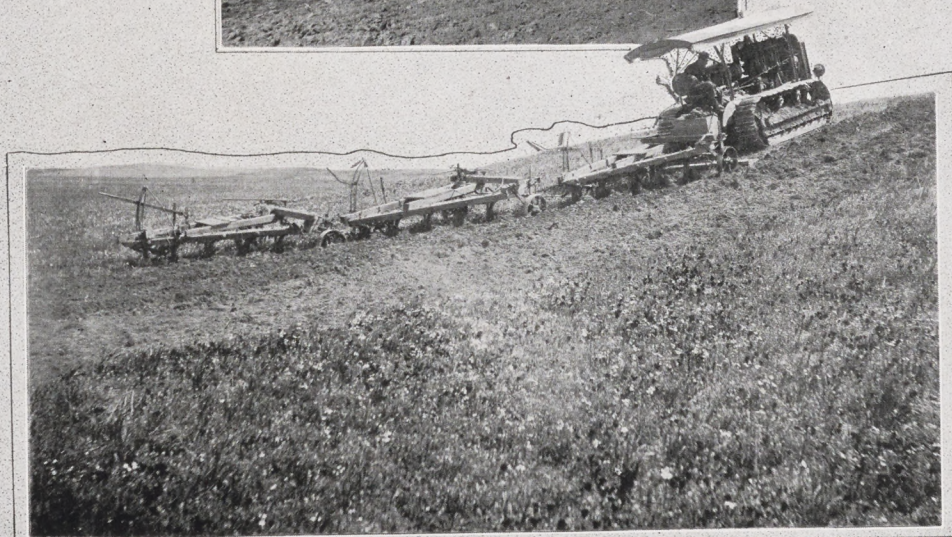
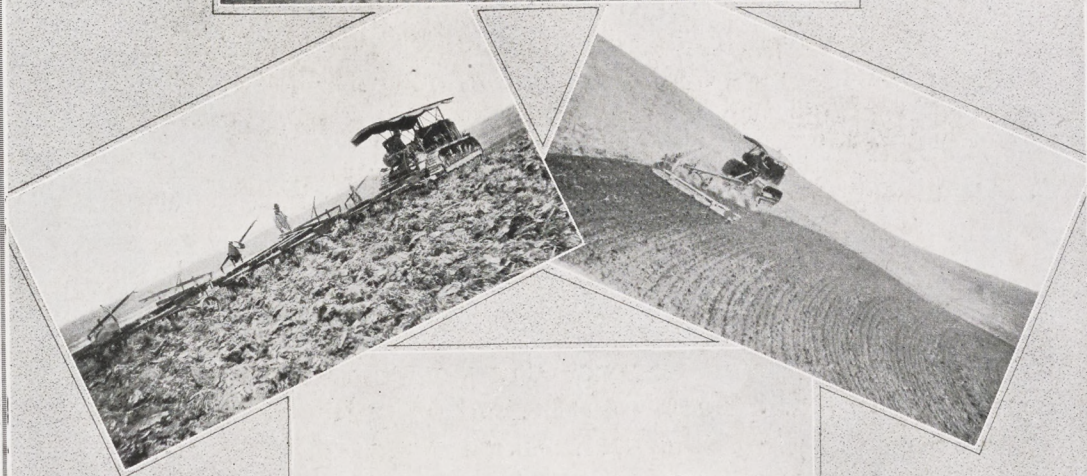


Pulling Harvester Over 40 percent Grade near Coulee City, Wash., Cutting 16-foot Swath

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# PLOWING and DISCING



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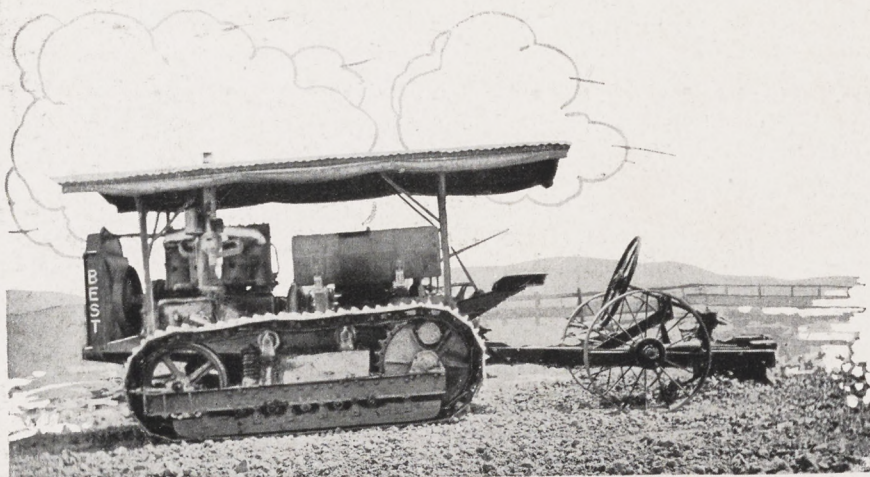




Hauling Grain to Market in California with a Best "Sixty"

THE BEST "Sixty" clears land, plows, harrows, cultivates, seeds and harvests crops and hauls them to market, day or night. The "Sixty" furnishes power to pump, saw wood, thresh, fill silos, run rock crushers, build roads, dig ditches, build levees, haul supplies, haul lumber and ore, pull trees and stumps, move houses or barns, and level land. It performs any heavy duty work for which a large mobile power plant can be used.

BEST Tractors have always rendered consistent and constant service. The aim has always been to give the user a better tractor than he has been able to buy elsewhere.

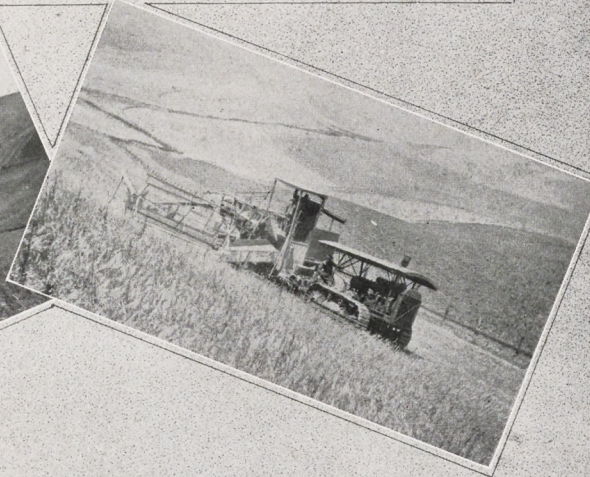
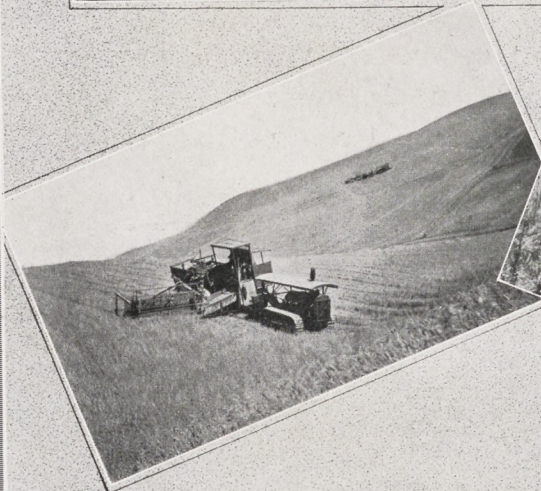
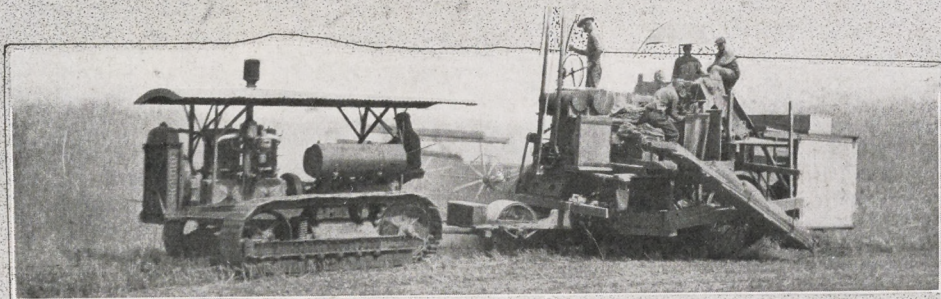


BEST "Sixty" Pulling Single-Point Sub-Soiler 36 inches Deep

**BEST TRACKLAYER SIXTY**



# HARVESTING



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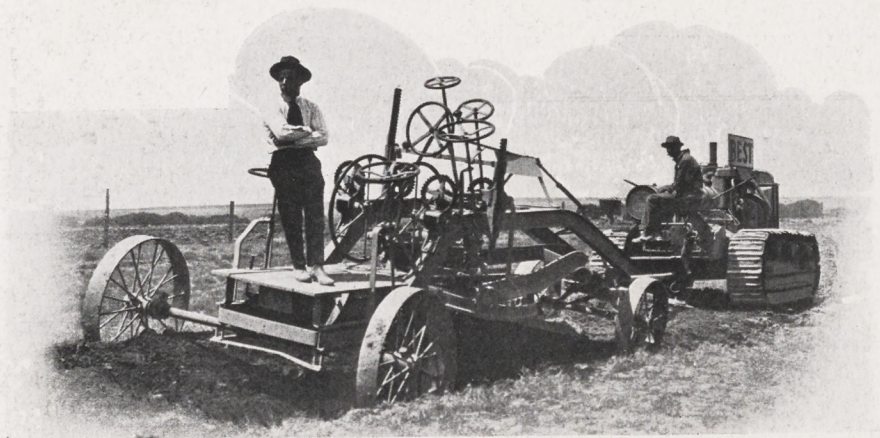




THE "Sixty" H.P. BEST Tractor is the result of a determination upon the part of its builders to give the purchaser a tractor equal in design, material and workmanship to the highest quality truck or automobile on the market.

A recent "Sixty" H.P. purchaser, one of the big Western farmers, said, after seeing the "Sixty" H.P. in process of construction:

"I never expected to see the day when the farmer would be able to buy a piece of farm machinery of such superb material and workmanship as your 'Sixty' H.P. Tracklayer."

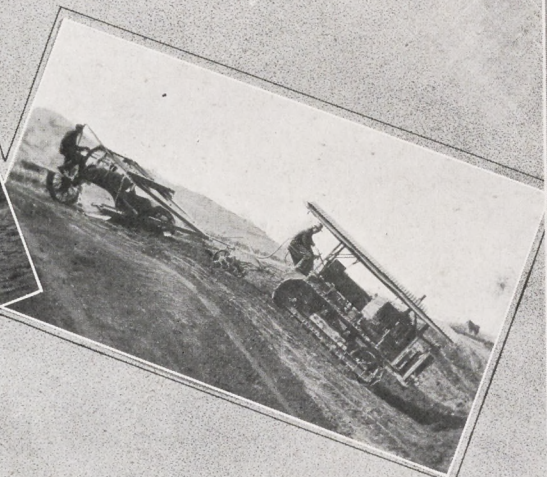


BEST "Sixty" on Road Work in Colorado

**BEST TRACKLAYER SIXTY**

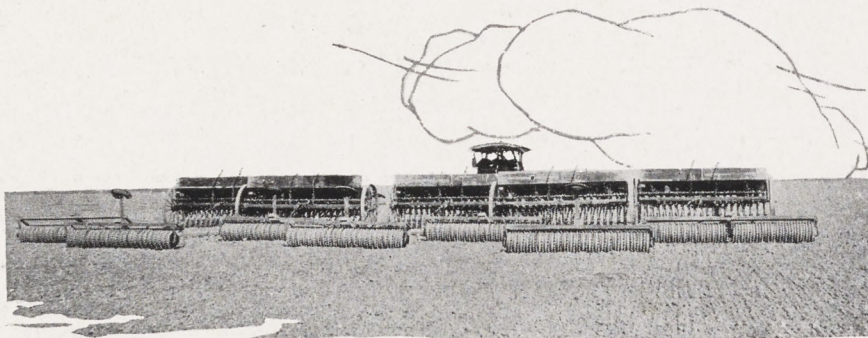


# LEVELING and DITCHING

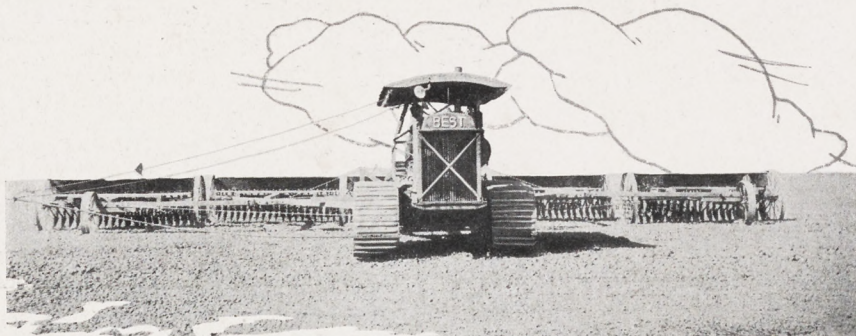


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BEST "Sixty" pulling 50 feet of drills and 55 feet of rollers (a 75 H. P. load) at half mile per hour faster than the "Seventy-five." This outfit is capable of doing 180 acres in a ten-hour day



Front view of BEST "Sixty" on same job as described above, working in Tulare Lake bottom, California

**B**EST Tractors have been in operation in California and throughout the world for nearly a generation. It is not unusual for them to work eleven months out of the year on the Pacific slope, and very often a large percentage of this time is both day and night. They are used in nearly every country on the globe and giving universal satisfaction.

During the many years BEST Tractors have been built the best material and labor have been put into them.

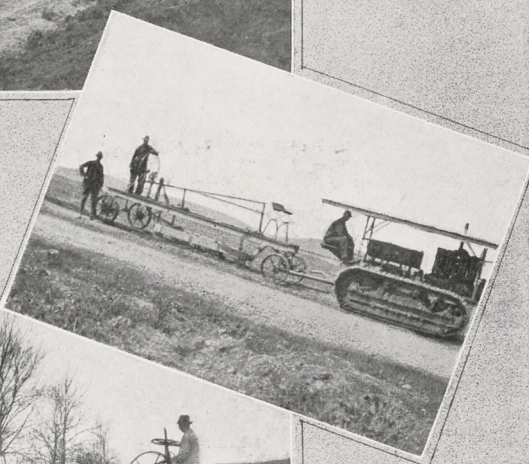


BEST "Sixty" Pulling Sixteen-Foot Harvester on Steep Side Hill

**BEST TRACKLAYER SIXTY**



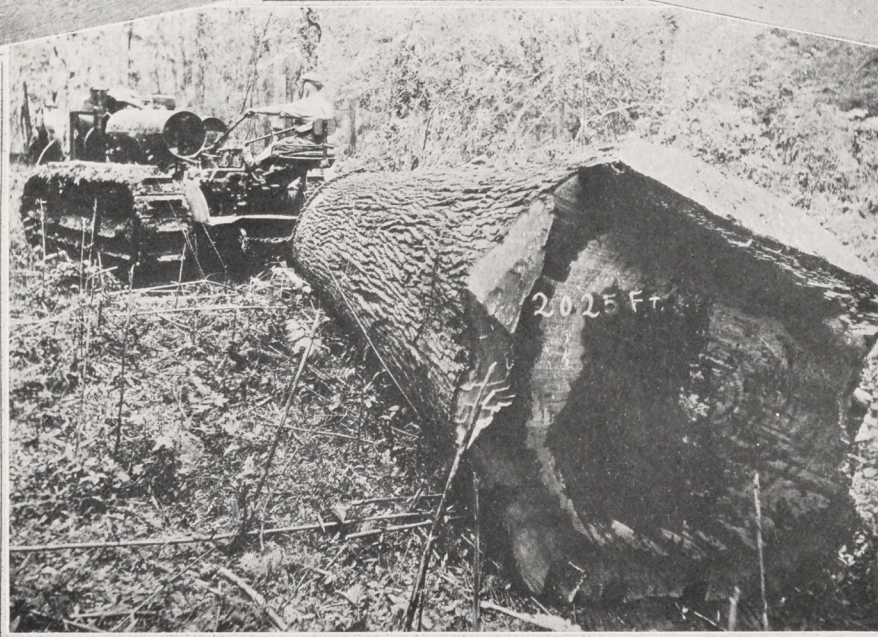
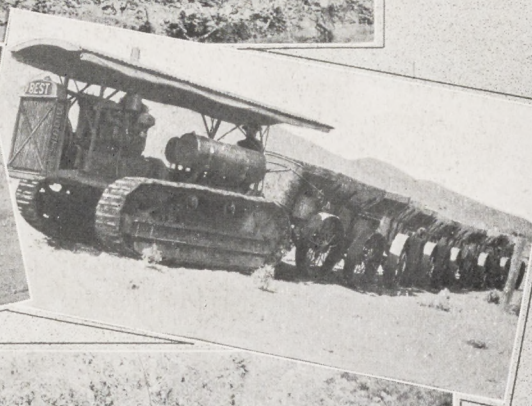
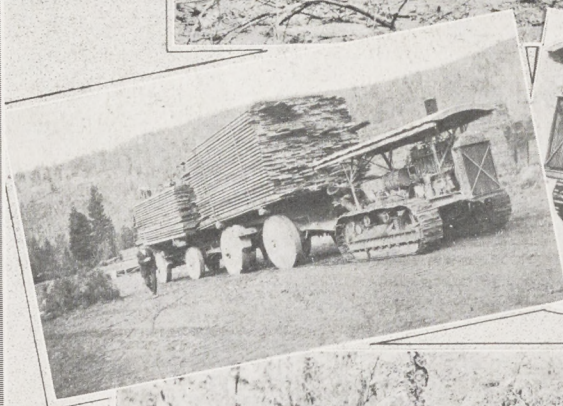
# ROADBUILDING



BEST **TRACKLAYER** SIXTY

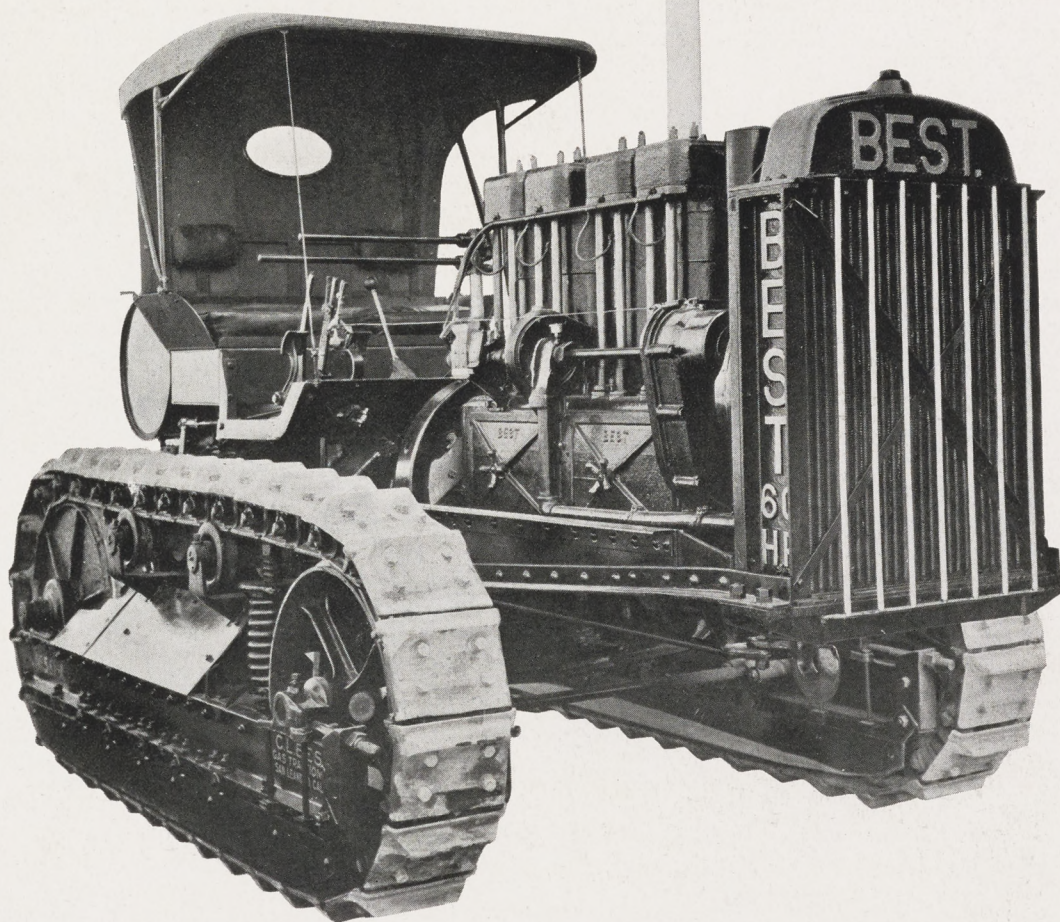


# LOGGING and HAULING



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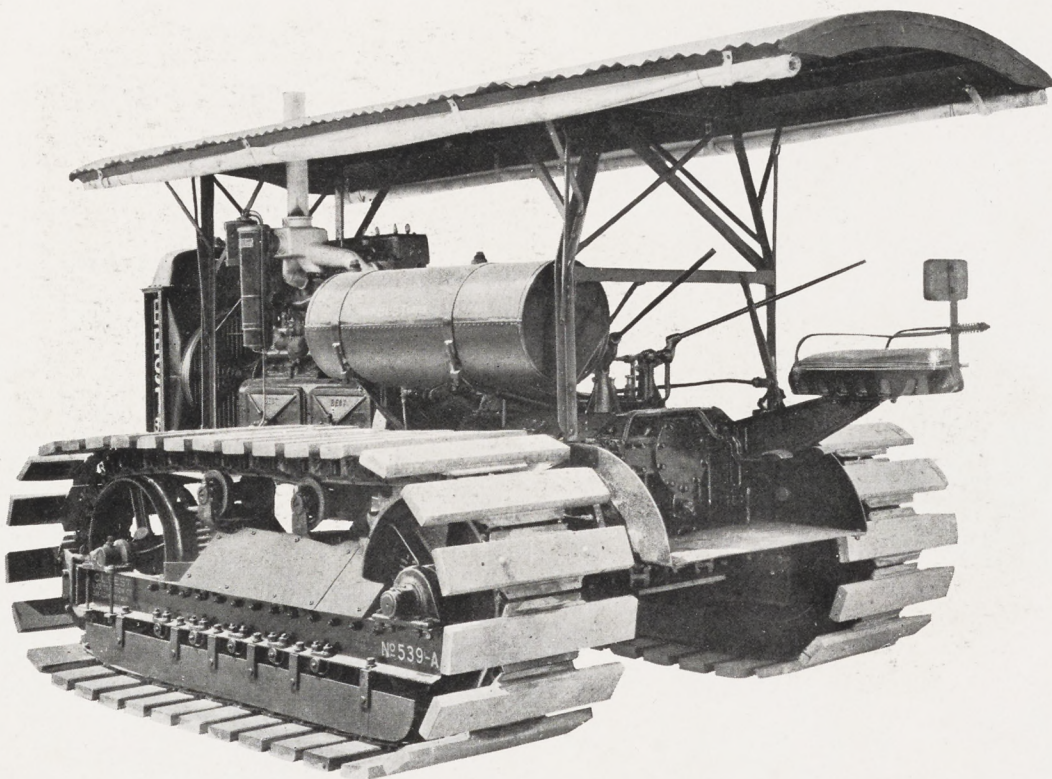
## The "Cruiser"

THIS model has all the features of our standard "Sixty" model, together with changes necessary to make a successful tractor for logging, lumbering, roadwork and freighting.

The new features installed on the "Cruiser" that do not appear in the "Sixty" are three speeds with reverse, selective gear shift, hand brake in addition to foot brakes, operator's seat on top, seats for two men, tool box underneath seat, swivel drawbar, front towing hook, radiator guard, folding top, cushion equalizer bar on swing frame, improved steering clutch control, and increased capacity gasoline tank.

**BEST TRACKLAYER SIXTY**





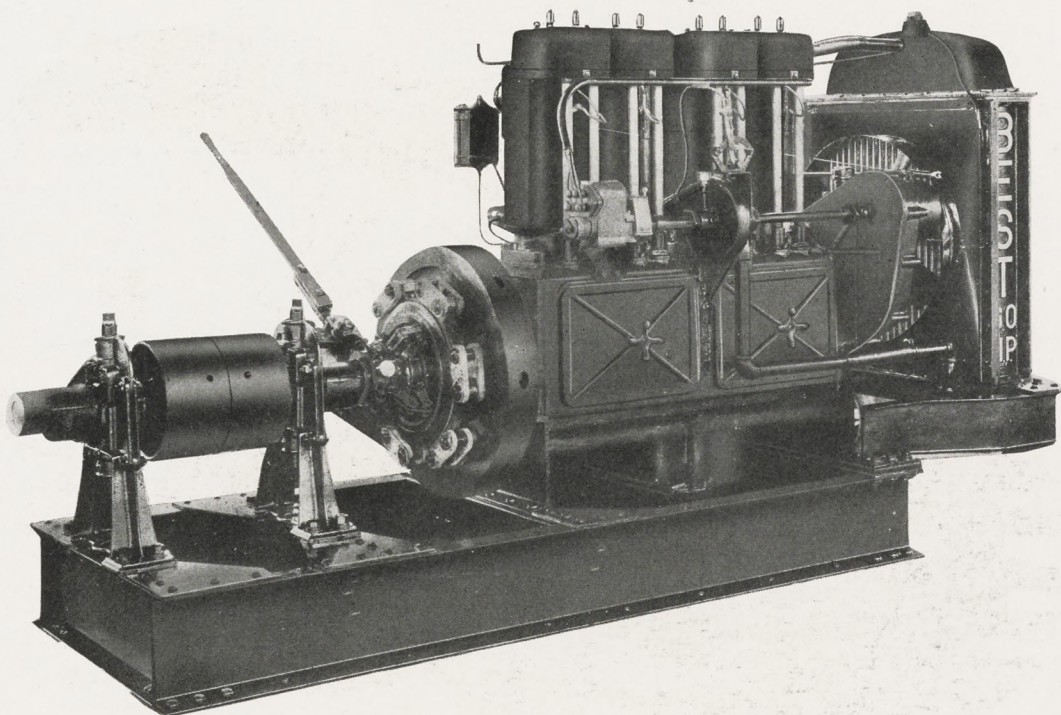
### “Swamp Special”

THE above illustration shows the “Swamp Special” model, which is a standard “Sixty” with lengthened axles and special hardwood shoes 33 inches in length. This model is used in very soft land, marshes, etc.

The 33-inch shoe brings the ground pressure per square inch to three pounds. The “Swamp Special” can be operated where a man cannot work.

BEST **TRACKLAYER** SIXTY





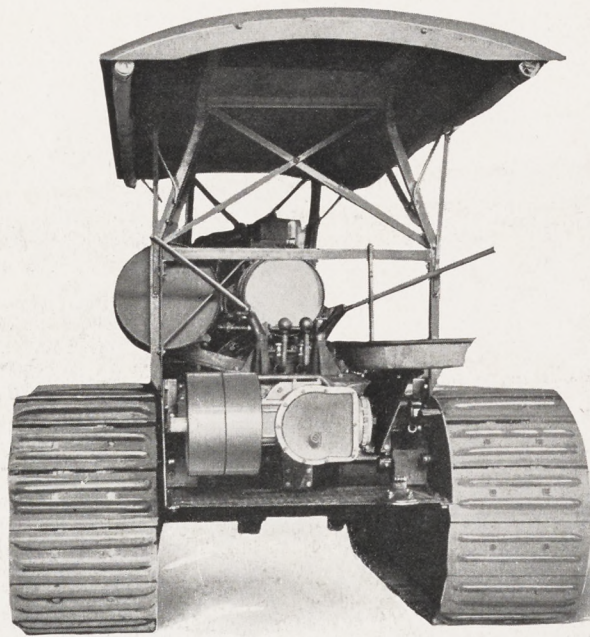
## BEST Power Plant for Pumping and Stationary Work

A power plant of 60 H.P., which costs far less than other stationary plants of the same horse-power, and is very economical to operate. It consists of a standard BEST motor, radiator and clutch assembly, mounted on a channel iron frame, with two hangers supporting the pulley shaft.

This plant can be used for pumping, generating and all other forms of stationary work where the power needed does not exceed 60 H.P. When additional power is required, these plants can be set up in multiples, and any desired power developed.

BEST **TRACKLAYER** SIXTY





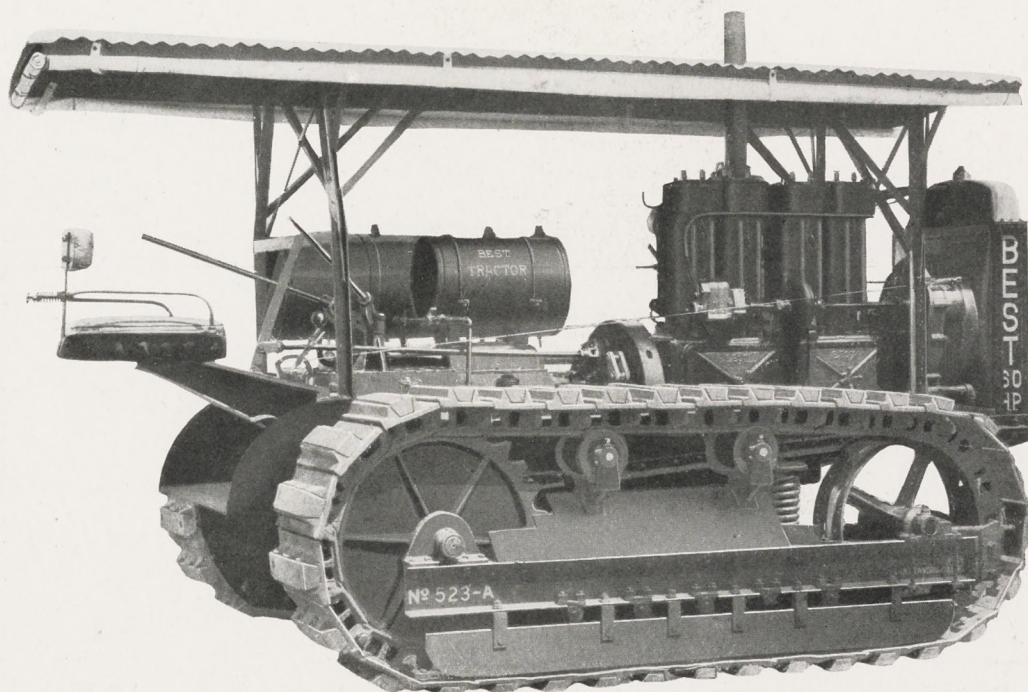
## The Stationary Drive

THE stationary drive attachment for the BEST "Sixty" H.P. Tracklayer Tractor can be ordered as an extra. This attachment is easily installed or removed. It provides an efficient and convenient drive for threshers, pumps and other non-moving implements. The direction of rotation is such that a crossed belt must be used with implements of standard make. This is the most satisfactory and efficient form of belt drive for this class of work.

The stationary drive is mounted on ball and roller bearings, and the gears are hardened. Transmitting power as it does to the pulley through only one set of gears mounted on anti-friction bearings, and being housed in an oil-tight case, it gives practically the full power of the motor at the belt pulley. All that is necessary to attach the stationary housing is to remove the cover on the rear end of the transmission case and place stationary as shown in above illustration. A coupling is provided on the stationary shaft which fits over the end of the upper transmission shaft without the use of any screws or other fastenings.

BEST  SIXTY





## Filler Blocks

IN moving the tractor over improved roads or highways it is advisable to install the filler blocks or road shoes shown in the above illustration; this saves the surface of the road from any possible damage from the grouser on the standard shoe. The filler blocks are made of cast iron and are fastened to the shoes with two bolts to each block. Supplied as an extra.

BEST TRACKLAYER SIXTY



## Specifications of BEST "Sixty" Tracklayer Tractor

**Motor:** BEST 4-cycle, 4-cylinder, water-cooled, valve-in-head type. Separate cast cylinders, separate cast cylinder heads. Oiled by constant-level splash system with gear-driven pump which delivers oil to each connecting-rod trough. A heavy-duty, low-speed motor. Practical design, easy of access.

**Bore:**  $6\frac{1}{2}$ ".

**Stroke:**  $8\frac{1}{2}$ ".

**Valves:** In head, one-piece nickel steel turned and ground.

**Oil-Circulating Pump:** Rotary gears driven by enclosed cut-steel spiral gear.

**Rating:** 35-60 H.P., 650 R. P. M.

**Governor:** BEST ball type enclosed in oil, one moving lever.

**Carburetor, Ensign:** Magneto, Bosch, ZR4. Dust and waterproof.

**Piston Pins:** Held firmly in connecting rod with clamp bolt passing through side of pin. Pin is carbonized, hardened and ground.

**Cam Shaft:**  $1\frac{1}{4}$ " diameter, ground Cumberland steel .35 carbon. Four bearings, all removable, wide hardened face cams keyed and pinned to shaft.

**Fan:** The fan and shaft are gear driven. To compensate for shock of starting and stopping, a spring and friction clutch are interposed between the gear and fan. This construction is far superior to the old style expensive and troublesome belt.

**Steering Levers:** Extremely large multiple-disc clutches necessitate little pressure on the steering levers to guide the tractor.

**Crank Shaft:** .45 carbon steel heat-treated drop forging flywheel flange forged integral.  $55\frac{3}{4}$ " long and 3" diameter.

**Truck Spring:** The trucks are spring mounted, each oscillating independently of the other.

**Truck Rollers:** Mounted on roller bearings, carry the tractor. They run over the track as easily as a railroad coach over a railroad track.

**Speed:** High,  $2\frac{3}{8}$  m.p.h.; low,  $1\frac{7}{8}$  m.p.h.; reverse,  $1\frac{1}{4}$  m.p.h.

**Track:** Special Manganese steel, with famous no-grease, minimum friction BEST "Rocker Joint" link connection. Track centers, 72". Standard equipment, 20" cast steel shoes. Length of track on ground, 88". Ground pressure, 20" shoe, 4.97 lbs. per square inch.

**Front Idler:** Is double-flanged wheel, no contact with spools of track.

**Tank Capacity:** Distillate, 50 gallons; gasoline, 3 gallons; oil, 16 gallons. Equipped to burn distillate or gasoline. Kerosene burner furnished as an extra when desired.

**Dimensions:** Length over all,  $11' 8\frac{7}{8}"$  (including seat,  $13' 8"$ ). Height, top radiator,  $76\frac{1}{2}"$ . Width over all, 20" shoes, 92". Width between tracks, 52". Ground clearance,  $14\frac{1}{2}"$ . Drawbar,  $18\frac{1}{2}"$  high.

**Weight:** 17,500 lbs.

**Stationary Drive** attachment, furnished as an extra. Standard pulley diameter, 16". Pulley speed, 650 R. P. M. Belt speed, 2640' per minute.

**Electric Light Equipment** (generator and lamps) for night work furnished as an extra.

### C. L. BEST GAS TRACTION COMPANY

HOME OFFICE AND FACTORY

SAN LEANDRO, CALIFORNIA, U. S. A.

SAN FRANCISCO SALES OFFICE AND DISPLAY ROOM

730 VAN NESS AVENUE

Cable Address: "LEOBEST"

FORM 191 8-20-15M

**BEST TRACKLAYER SIXTY**







**TRACKLAYER**